



MARSHALL STAR

Serving the Marshall Space Flight Center Community

March 27, 2003

Starship 2040 exhibit visits Alabama Institute for Deaf and Blind

by Douglas D. Frazier

Education – coupled with future technology - is the mission for Starship 2040, a NASA exhibit that allows young visitors to experience what commercial space flight might be like four decades from now.

Recently, more than 350 students, in kindergarten through the 12th grade at the Alabama Institute for the Deaf and Blind in Talladega, boarded the 48-foot tractor-trailer housing the exhibit to soak in that experience. For the students – as well as 100 of the Institute’s faculty – it was a memorable day of education and fun.

Many students rushed from their dorm rooms to watch as the exhibit was set up on campus. All were eager to explore the full-sized mock-up of a futuristic spacecraft’s control, passenger and engineering compartments.

Five Marshall Center employees “onboard” Starship

See Starship on page 3



Courtesy photo/Marshall Imaging Services

A student at the Alabama Institute for the Deaf and Blind checks out the Fusion Drive Engine display inside Starship 2040.

Chandra confirms gamma-ray burst-supernova connection

from the Smithsonian’s Chandra X-ray Center

Scientists announced Monday that they have used NASA’s Chandra X-ray Observatory to confirm that a gamma-ray burst was connected to the death of a massive star.

This result is an important step in understanding the origin of gamma-ray bursts, the most violent events in the present-day universe.

“If a gamma-ray burst were a crime, then we now have strong circumstantial evidence that a supernova explosion was at the scene,” said Nathaniel Butler of

Photo by Emmett Given, NASA/Marshall Center



Silver Snoopy surprise!

Lori Manus, left, reacts as members of her family arrive at the Marshall Center to watch Expedition Five crew member Dr. Peggy Whitson, right, present her with a Silver Snoopy award last week. Visiting the Center with Whitson were members of the STS-113 crew. For more Silver Snoopy award photos, see pages 4-5.

See Chandra on page 6

'Take Our Children to Work Day' is opportunity to inspire and educate

Take our Children to Work Day is just around the corner, and I want to encourage you to participate in this wonderful opportunity.

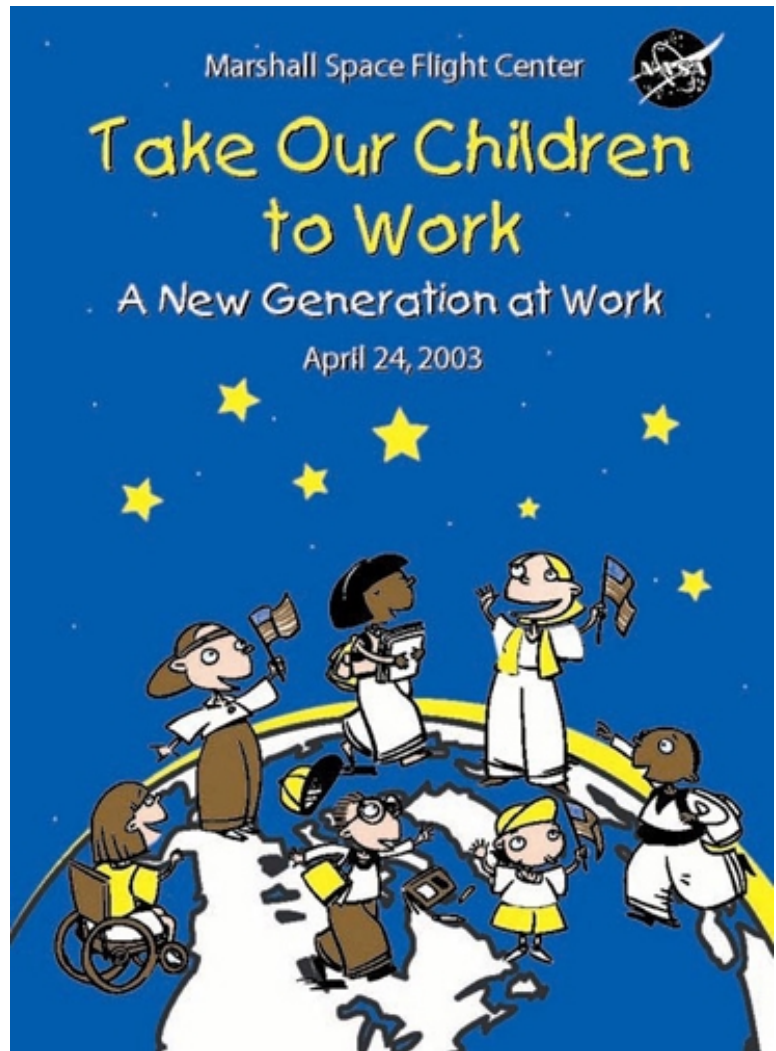
Our children are curious about what we do all day after we head out the door every morning, and this is an opportunity to let them see first-hand.

I can still vividly remember the time I spent a portion of a day at my aunt's place of business. On another occasion my dad took me to his work on a Saturday morning. These experiences had a real impact on me. I am hopeful your children will benefit from seeing your place of work and the people with whom you work.

It is a great place to work and inspiring our children to think about working for NASA, or joining the aerospace industry, would be a good outcome.

On the other hand, just having them know you in your work environment and knowing that you thought them important enough to share it with them will likely be a special memory for them for years to come.

— Art Stephenson
Marshall Center Director



T-shirt orders, workshop and tour registration information available

Deadline for ordering T-shirts for "Take Our Children to Work Day" is April 3.

Information on ordering T-shirts and registration for workshops, tours and other activities for the April 24 event is

available at <http://inside.msfc.nasa.gov/CHILDREN/>.

Since 1994, the Marshall Center has used "Take Our Children to Work Day" as an opportunity to promote education

and awareness in children through exposure to the space program. Children in grades 3-12 can participate in the annual event and it is open to civil servants and on-site contractors.

Marshall Easter Egg Hunt is April 5

The Marshall Center's annual Easter Egg Hunt will be April 5 at the Marshall Picnic grounds. In case of rain, the hunt will be held inside the Activities Bldg. 4316. Registration begins at 1:30 p.m., with the egg hunt at 2 p.m. for children up to 10 years old.

Employees must register any family members in the

Visitor Management System if the family members will not be attending with a badged employee.

To register a non-badged family member, go to <http://co.msfc.nasa.gov/ad50/pts/vms.html>.

For more information, call Janie Crawford at 544-0514 or Gabrall Yeldell at 544-1382.

Starship

Continued from page 1

answered questions about the exhibit.

Nicholas, a seventh-grade student, welcomed the Starship 2040 staff by exclaiming, "I love NASA, and love watching the Shuttle launches!"

Marshall's Equal Opportunities Office, responsible for developing and administering comprehensive programs to ensure inclusion for citizens and students with disabilities, sponsored the visit. The Customer and Employee Relations Directorate organized the exhibit.

The Alabama Institute for the Deaf and Blind, founded in 1858, educates many of Alabama's blind and deaf youth. The students' disabilities range from partially deaf or blind to total deafness or blindness.

One Marshall Center interpreter who was onboard Starship for the tour has a special and personal tie to the Institute. William P. "Chip" Dobbs III, an industrial property management specialist for the NASA Property Management Group at



Courtesy photos/Marshall Imaging Services

Students from the Alabama Institute for the Deaf and Blind tour the 2040 exhibit.

experience for the school children," Hayes said.

The administrators marveled at the enthusiasm the students had for Starship 2040.

"I'm proud of the detailed and thoughtful questions the students asked - and they are having so much fun!" Shaw said.

The compelling aspect of Starship 2040 is not just its futuristic appeal, but also its foundation in real technologies now being explored by the men and women of NASA.

Martin Jensen, NASA outreach coordinator with Starship 2040, said, "One of the primary missions of NASA is to educate young people about careers in technical fields such as science, mathematics and engineering. With the Starship 2040 exhibit, students at the Institute saw real evidence of what careers such as 'aerospace engineer' and 'astrophysicist' can lead to."

The writer, an employee of ASRI, supports the Media Relations Department.



Marshall team member Chip Dobbs III, right, a former student of the school, shares information with Moran Colburn, a retired Institute faculty member.

Marshall, recently was appointed by Gov. Bob Riley, subject to Senate confirmation, to the school's Board of Trustees.

"I went to school here and I want to give back what they gave me - to help children live a better life and get a good education," Dobbs said. "Helping with the Starship 2040 presentation and interpretation is a great way to do just that."

The Starship 2040 exhibit visit was very important," Dobbs continued, "because many of the students have not had this type of educational exposure to science before."

Also touring the 2040 exhibit were Dr. Pam Shaw, the Institute's principal, and Dr. Lynn Hayes, assistant principal.

"It's so wonderful to have NASA provide this educational



Students learned what future space travel might be like during their tour of Starship 2040 sponsored by the Marshall Center.

Marshall team members receive Silver Snoopy



Members of the STS-113 and Expedition Five crews visited the Marshall Center on March 18.

The crew members detailed mission highlights for Marshall team members, signed autographs, and handed out Silver Snoopy awards to selected employees for their professional dedication to America's

space program.

STS-113 crew members Cmdr. James Wetherbee and Mission Specialists Michael Lopez-Alegria and John Herrington visited the Center, along with Expedition Five crew member and International Space Station Science Officer Dr. Peggy Whitson.



Gloria Carr (ED02) receives a Silver Snoopy from Jim Wetherbee.

Marshall Imaging Services



Silver Snoopy recipients, from left, Daniel Adams (AD10), Sandra Allan (AD35), astronaut Michael Lopez-Alegria, Judy Glenn (AD01), Charles Winkler (AD35) and Linda Porter (AD34).

Photo by Ray Downward, NASA/Marshall Center



Astronaut Dr. Peggy Whitson presented Silver Snoopy awards to, from left, Carmen Price (FD32), David Hood (FD03), Whitson, Charles Shariett (FD24), Lori Manus (FD34), and Gary Knickerbocker.

Photo by Emmett Given, NASA/Marshall Center



Astronaut Michael Lopez-Alegria, left, presents a Silver Snoopy to Lucy Boger (AD21).

Photo by Ray Downward, NASA/Marshall Center

awards from STS-113, Expedition Five crews



Photo by Terry Leibold, NASA/Marshall Center

Richard Mell of AZ Technology accepts a Silver Snoopy award from astronaut John Herrington.



Photo by Ray Downward/Marshall Center

Accepting Silver Snoopy awards from astronaut Michael Lopez-Alegria, center, are, from left, Thomas Torres (ED43), John Lowery (ED11), Russell Abrams, (ED12), and Geoffrey Hintz (ED14).



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Cmdr. Jim Wetherbee, center, with Silver Snoopy award recipients, from left, Michael Suits (ED32), James Hodo (ED33), Terrie Gardner (ED35), and Robert Lambdin (ED35).



Photo by Terry Leibold, NASA/Marshall Center

Astronaut John Herrington, center, presents Silver Snoopy awards to, from left, Joe Fawaz of Hernandez Engineering and Don Andrews (QS10).



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Jim Wetherbee, center, with Silver Snoopy recipients, from left, Jay Sambamurthi (MP51) and Madge Griffin (MP51).



Marshall Imaging Services

Silver Snoopy recipients, from left, Douglas Fox (ED22), Carlton Foster (ED24), Cmdr. Jim Wetherbee, James Holt, Ricky Wilbanks (ED27), and Don Bates (Sverdrup).

Chandra

Continued from page 1

Massachusetts Institute of Technology in Cambridge, lead author of a paper presented at a recent meeting of the High Energy Division of the American Astronomical Society.

Chandra was able to obtain an unusually long observation — approximately 21 hours — of the afterglow of GRB 020813 named because the High-Energy Transient Explorer, HETE, discovered it on August 13, 2002. A grating spectrometer aboard Chandra revealed an overabundance of elements characteristically dispersed in a supernova explosion. Narrow lines, or bumps, due to silicon and sulfur ions — atoms stripped of most of their electrons — were clearly identified in the X-ray spectrum of GRB 020813.

“Our observation of GRB 020813 supports two of the most important features of the popular supra-nova model for gamma-ray bursts,” Butler said. “An extremely massive star likely exploded less than two months prior to the gamma-ray burst, and the radiation from the gamma-ray burst was beamed into a narrow cone.”

An analysis of the data showed that the ions were moving away from the site of the gamma-ray burst at a tenth the speed of light, probably as part of a shell of matter ejected in the supernova explosion. The line features were observed to be sharply peaked, indicating that they were coming from a narrow region of the expanding shell. This implies that only a small fraction of the shell was illuminated by the gamma-ray burst, as would be expected if the burst was beamed into a narrow cone. The observed duration of the afterglow suggests a delay of about 60

days between the supernova and the gamma-ray burst.

The supra-nova model involves a two-step process: the first step is the collapse of the core of an extremely massive star accompanied by the ejection of the outer layers of the star. The collapsed core forms a rapidly rotating black hole surrounded by a swirling disk of matter. In the second step this black hole-disk system produces a jet of high-energy particles.

Shock waves within the jet produce the burst of X-rays and gamma rays that is observed to last only a few minutes. Interaction of the jet with the ejected supernova shell produces the X-ray afterglow, which can last for days or even months. The reason for the delay between the formation of the black hole and the production of the jet is not understood.



Photo by Doug Stoffer, NASA Marshall Center

Celebrating Women's History Month

Dr. Shari Shuck, left, assistant professor of history at the University of Alabama in Huntsville, looks at women's aviation memorabilia last week with Dr. N. Jan Davis, director of the Flight Projects Directorate at the Marshall Center. Shuck was the guest speaker for the Women's History Month celebration at the Center.

Obituaries

William “Bill” Everett Davidson, 76, of Wilkeson, Wash., died March 13. Burial was in Tahoma National Cemetery in Covington, Wash.

Davidson was born Aug. 20, 1926, in Dayton, Ohio. He graduated from Michigan State University with a degree in mechanical engineering and served as a technical sergeant in World War II. He began his career at the Sandia Base in Albuquerque N.M. working with rocket sled testing. He began working with the Wernher von Braun group in 1954, and joined the Marshall Center when it was created in

1960. He worked on various programs at the Center, including the Jupiter, Mercury-Redstone, Saturn and Apollo programs. From 1973-1977, he worked on the Skylab program.

Before his retirement in 1985, he worked on the NASA-Marshall IUS project at the Boeing plant in Kent, Wash.

He is survived by his wife, Lucille; five children, Casey Davidson of Baxter Springs, Kan., Juliet Davidson of Tacoma, Wash., Nannette Boot of Aalsmeer, The Netherlands, Daniel Davidson, of Tacoma, Wash., and Darlene Veliz of Bellview, Wash.; 12 grandchildren; and six great-grandchildren.

Job Announcements

MS03D0065, AST, Experimental Facilities Development. GS-801-13, Center Operations Directorate, Facilities Engineering Department, Operations and Maintenance Group. DEU/Outside Hire. Closes March 28.

MS03C0066, Integrated Financial Management Advisor. GS-501-14, Center Operations Directorate, IFM Integration Project Office. Competitive Placement Plan. Closes April 4.

Center Announcements

MARS Tennis Club membership open

The MARS Tennis Club 2003 membership drive is open until March 31. NASA employees, retirees, on-site contractors and family members are eligible to join. For more information, call Amy Hemken at 544-7097 or go to <http://inside.msfc.nasa.gov/MARS/clubs.html>.

AIAA 2003 Engineering Scholarship Program open

The American Institute of Aeronautics and Astronautics Alabama-Mississippi Section 2003 Engineering Scholarship Program is open for high school seniors. Three scholarships will be awarded to promote career study in the aerospace industry and the pursuit of a related engineering or science degree at an Alabama or Mississippi university. Applications are due by Monday. For more information go to <http://www1.msfc.nasa.gov/AIAA/> or call 721-2422, 544-7684 or 782-5972.

Annual 'Software of the Year' competition nominations open

The annual call for nominations for the NASA Software of the Year Award is open until April 18. The award is for recognition of software developed and owned by NASA. The recognition includes a Space Act award of up to \$100,000. For details, see "Inside Marshall" or call 544-0013 or 544-0014.

FAPAC national leadership conference registration open

The 18th annual Federal Asia Pacific American Council National Leadership Training Conference will be May 12-16 in Arlington, Va., and Washington, D.C. Registration is due by April 26. For more information, go to conference@fapac.org or <http://www.fapac.org>.

Marshall Association meeting set for Tuesday

The Marshall Association will meet from 11:30 a.m.-1 p.m. Tuesday at

the Redstone Officers' and Civilians' Club. Vann R. Jones, the Marshall contracting officer will speak on his participation as a photographer in the Columbia debris recovery effort. Cost is \$9 at the door. Reservations are required and can be made by e-mail or by calling Cliff Bailey at 544-5482

AIAA annual Section Award nominations open

The American Institute of Aeronautics and Astronautics Alabama-Mississippi Section 2002-2003 Annual Section Awards nominations are open until April 18. The awards will be presented at the annual Officers and Board of Director Installation and Awards Banquet on May 15. For more information, see "Inside Marshall" or call Steve Noneman at 544-2048.

Facilities Office retirees breakfast meeting is April 8

Facilities Office retirees, current employees and friends will meet for breakfast at 8 a.m. April 8 at Shoney's on University Drive at Memorial Parkway in Huntsville. For more information, call Carl Gates at 232-2695.

Von Braun Astronomical Society meets April 5

The Von Braun Astronomical Society will present "The Spring Skies" at 7:30 p.m. April 5 at the Wernher von Braun Planetarium in Monte Sano State Park. Admission for non-members is \$3 for adults and \$2 for children 12 and under. For more information, call Mitzi Adams at 961-7626.

Tickets available for UNCF Banquet

The 25th Annual United Negro College Fund Banquet will be at 6:30 p.m. April 17 in the North Hall of the Von Braun Center. Tim Reid of UPN's television comedy "Sister, Sister" and Daphne Maxwell Reid of the network's comedy "The Fresh Prince of Bel-Air," will be featured guests. Music will be provided by

electric violinist Michael Ward. Tickets cost \$75. For more information, call Chanel Leslie at 544-3740.

MARS Tennis Club tournament is Monday

The MARS Tennis Club will hold a Hi-Lo Closed Doubles Tournament on Monday. Warm up is at 4:30 p.m. with the tournament at 5 p.m. Food will be provided. For more information, call Ronda Moyers at 544-6809.

Bench marking training offered

Nine slots are left for bench marking training available on a first-come, first-serve basis. The event is 8 a.m.-4:30 p.m. Tuesday and Wednesday at the Marshall Institute, Room 712, on Cochran Road in Madison. For more information, call Georgann Freeman at 544-6525 or see "Inside Marshall."

New print servers added to IDS Utilities at Marshall

Three new print servers have been added to the IDS Utilities folder at the Marshall Center. Employees should delete their current installed printer and then install their printer from one of the new servers. The old print server will be retired April 30. For print queues of the new servers, see "Inside Marshall." Call 544-HELP, Option 7, for questions regarding how to load the print queue.

Lunch-time prayer group open

A lunch-time prayer group is forming to meet from noon-12:30 p.m. Tuesdays and Thursdays. For more information, call Johnnie Wilson at 544-1007, Deborah Wills at 544-4525 or Terrell Boyd at 544-8294.

Procurement Office retirees meeting

Procurement Office retirees will meet for breakfast at 9:30 a.m. Tuesday at Mullins Restaurant on Andrew Jackson Way in Huntsville. For more information, call Carl Melton at 837-5604.

Employee Ads

Miscellaneous

- ★ Rickenbacker 4003 bass guitar, teal w/ white guard, chrome, triangle inlays, w/ case, like new. \$1,250. 306-0700/303-3702
- ★ Aquarium, 120-gallon, glass cover, lights, cabinet w/doors, rocks, heaters, decorations, more, \$650. 518-8018
- ★ AKC registered Australian Shepherd puppies, first shots, 6-weeks old, \$300. 828-3668
- ★ Airstream trailer; Troybilt tiller; electric lift chair; 93 Readers Digest condensed books. 881-6040
- ★ Men's R/H Accubar golf clubs, 3 woods, 8 irons, \$125; outside hunter door, 36", \$50. 256-337-2805/256-828-7013
- ★ Lowes F/B boat, 16', 1990 25HP Mercury, trolling, new deck & carpet, \$2,200. 256-740-0142
- ★ Kenmore electric wall oven, black, 24", self-cleaning, push-button controls, \$300. 859-8775
- ★ Dish TV receiver, remote, dish antenna, card and cable, Model 301, \$95. 837-0656
- ★ 2002 Kubota L3010 tractor, 32HP, 4WD, LA482 front-end loader, PTO, shuttle-shift, 150 hrs., \$15,250. 256-651-4683
- ★ TV stand on casters, 30"wx18"Dx20"H, dark Walnut, \$20. 751-2460
- ★ Traditional brown plaid sofa, loveseat, & chair w/matching blinds, oak entertainment center, \$250 for all. 859-1677
- ★ Linksys cable/DSL router #BEFSR41, \$45; Alcatel DSL modem, will work w/ BellSouth DSL. 883-0724/lv. msg.
- ★ Zenith 36" color TV, PiP, remote, stereo sound, \$350 obo. 232-9998/Marcus or Denise
- ★ John Deere STX38, 12.5HP Kohler, 38" cut, new belts and bearings, \$650. 256-775-2715
- ★ Murray Go-Cart, 2-seats, shoulder harness/belts, roll cage, \$550; solid mahogany executive desk, \$300. 881-3527

- ★ AKC registered German Shepherd puppies, born 1/17/03, black & tan, 2-males, 1 female. 256-694-5912
- ★ Thermos grill-to-go portable grill, used once, \$75. 881-7000
- ★ Lawn Boy mower, 21" push type, \$25. 534-4968
- ★ Small painted wood desk w/7 drawers, \$50; painted wood corner shelves, \$15. 533-4824
- ★ Electric lift chair/recliner, brown, \$150. 256-498-0325
- ★ 2001 John Deere LT133 riding mower w/mulching adapter, 13HP, 38" cut, \$1,200. 256-881-6154
- ★ Four tires & rims w/covers for Honda Accord or Honda vehicle, \$200. 694-9610
- ★ Super single waterbed w/heater, storage drawers, \$200. 256-232-7896
- ★ Weight bench, dumbbells, curling bar and metal weights, \$70. 694-9610
- ★ Piano, upright w/bench, \$500. 256-859-1947
- ★ Wooden jungle gym accessories: 8' slide, \$45; Discovery Mountain, \$100; fireman's pole, \$20. 655-2056+

Vehicles

- ★ 1997 Nissan Altima SE, auto, air, power windows/doors, CD changer, 118K highway miles, \$6,000. 319-2895/682-8851
- ★ 2000 Toyota Avalon XLS, automatic, leather, sunroof, power seats, premium radio/CD, 63K miles, \$19,500. 539-6932
- ★ 1998 Chevrolet S-10, 4.3L/V6, auto, extended cab, 3-door, loaded, 90K miles, make offer. 256-753-2278
- ★ 1972 Boise motorhome, 32K miles, \$5,000; 1980 Datsun 200SX, 5-speed hatchback, \$1,500. 256-881-9150
- ★ 1994 GMC SL truck, 4x4, Z71, black, CD, auto, \$6,900. 256-796-5136
- ★ 2000 Dodge Grand Caravan SE, white, 30K miles, \$13,500. 256-828-2832
- ★ 1997 Ford F150 Lariat, ext. cab, leather, loaded, 5.4L/V8, 58K miles, new tires, \$11,500. 256-426-6549
- ★ 1964 Impala SS, 327; 1964 Impala SS

convertible; 1964 Impala SS convertible, all \$4,000. 256-316-1880

- ★ 1998 Cadillac Sedan DeVille, 23K miles, all-power, leather, heated seats, \$17,500. 852-1050 after 5 p.m.
- ★ 1995 Ford F350 XLT extended cab, dually power stroke diesel, 123K miles, new tires, \$9,900. 353-8120
- ★ 1997 Ford Explorer, V6, 4W drive, all-power, white, 77K miles, \$9,500. 931-937-8618
- ★ 1992 Toyota Corolla DX, 4-door, automatic, white w/blue interior, \$3,200. 828-1157
- ★ 1997 Ford Thunderbird, 4.6L, leather, sunroof, CD, keyless entry, one-owner, 67K miles, \$5,950. 721-3945
- ★ 1997 Jeep Wrangler Sport, 4x4, green w/tan soft top, 4.0L/V6, 5-speed, 80K miles, \$8,500. 882-7350

Wanted

- ★ Two tennis rackets in good condition for beginners. 830-1844
- ★ Anyone familiar with Green Tree Press "Computer Friendly" program designed for beginners. 256-232-0188
- ★ GM pickup/passenger car body/chassis suitable for rebuilt engine & transmission, prefer full size 2WD. 651-0702
- ★ Ford top-loader transmission for late 1960s to early 1970s. 883-9339
- ★ Two bowling balls, 10 pound. 650-5375

Lost

- ★ Cross pen w/gold trim & square "D" monogram on clip, near Room 1201, Bldg. 4203. 883-7994/Frank

Free

- ★ To good home, 4 year-old Redbone hound. 337-4205
- ★ One female indoor cat, spayed and de-clawed. 881-8176 after 6 p.m.

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